

TO: KSC Lifting Devices and Equipment (LDE) Community

FROM: SA-B1/J. Torsani

8 November 2010

SUBJECT: KSC LDE Committee Meeting Minutes

A KSC LDE Committee meeting was held on Thursday, 21 October 2010, at 9:30 a.m., in the Operations Support Building, K6-1096, conference room 5308.

Meeting attendees: (see attached roster)

Highlights of significant agenda items are detailed below:

1. The meeting's primary discussion centered around the new OSHA Rule for Cranes and Derricks used in Construction. 29 CFR 1926 Subpart CC replaced 29 CFR 1926.550 effective 8 November 2010. This significant improvement over the previous rule added many new requirements levied on the employer and other key individuals. Several of the more noteworthy changes addressed crane operator certification, signal person qualification, and rigger qualification.

Under KSC's present methods of licensing / certifying crane operators, signal persons, and riggers; I believe we already comply with the intent of these new OSHA requirements. With regard to crane operator certification, we have until 8 November 2014 to become fully compliant. The only thing lacking from our current certification processes is an independent third party audit (required every 3 years).

As KSC moves through the upcoming transition driven by the end of the Shuttle Program, the KSC LDE Committee will continue to balance current requirements with current needs to ensure full compliance with OSHA rules.

I highly encourage all concerned to review the new rule available in an easy-to-read, bookmarked PDF file on the KSC LDE Program Website <http://ksc-lde.ndc.nasa.gov/>. Additionally, a summary of key changes can be found through a link to the LDE Committee meeting charts under "What's New?" also on the website.

2. A secondary discussion involved a recently discovered issue with synthetic web slings. The concern is that when synthetic web slings are used with smaller shackle pin diameters, the resultant D/d ratio effectively decreases the sling's design factor to something less than 5:1. (Note: ASME B30.9 and NASA-STD-8719.9 both require 5:1 design factor.)

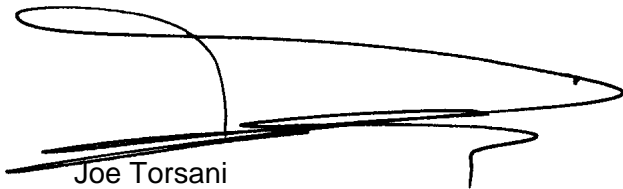
ASME B30.9 states, "9-5.10.1 Sling Selection (f) Rated loads cited in this chapter are based on pin diameters shown in WSTD A-WS-1. Pin diameters smaller than these may reduce the rated load of the sling." Pin diameters called out in WSTD A-WS-1 (Web Sling & Tie Down Association Recommended Standard Specification for Synthetic Web Slings) are significantly larger than shackle pins commonly used in rigging. For example: WSTD A-WS-1 requires a 3.75" pin to test a 3"-wide synthetic web sling. It then notes: "Caution: The above pin sizes were used to develop the slings [sic] vertical rated capacities. Pin sizes smaller than these may reduce the rated capacity of the sling."

Two synthetic web slings recently load tested to failure with shackles commonly used at KSC showed resultant design factors of significantly less than 4:1. Based on these tests and the above facts, LDEM posed the following question: "Should we de-rate our synthetic web slings across the board to accommodate their inevitable use with shackle pin diameters less than those stated in WSTDA-WS-1? If so, by how much?"

The subsequent LDE Committee discussion highlighted the need to gather more information. Some persons were skeptical that the loss of capacity was so severe and questioned the material properties of the test slings. Others asked how outside organizations in NASA and in the larger lifting community dealt with this issue. LDEM took an action to discuss this issue with other NASA Centers, local industry professionals, and rigging training organizations. More to come.

3. Finally, LDEM discussed present state of affairs with regard to unlubricated stainless steel wire rope on KSC overhead cranes. With the exception of the two 30-ton bridge cranes in the SSPF, all unlubricated stainless steel wire ropes will be replaced with lubricated improved plow steel ropes. Target for completion is early 2011.

Please contact me if you have any questions or need assistance with KSC lifting issues.
Thanks.

A handwritten signature in black ink, appearing to read "Joe Torsani", with a stylized, elongated shape extending to the right.

Joe Torsani
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